REMARKS

No claims are amended, added, or canceled by this response. For ease of reference, the Applicant reproduces the claims above, as previously presented.

In the Office Action dated August 11, 2006, the Examiner acknowledged the Applicant's Reply to Restriction Requirement dated May 22, 2006. The Examiner also acknowledged that claims 1 and 3 remain under active examination.

In Office Action, the Examiner rejected claim 1 under 35 U.S.C. § 103(a) as being unpatentable over Nishida et al. (U.S. Patent No. 4,974,680) in view of Kawasaki et al. (U.S. Patent No. 5,782,730). Claim 3 was rejected under 35 U.S.C. § 103(a) as being unpatentable over Nishida et al. in view of Kawasaki et al. and further in view of Tucker et al. (U.S. Patent No. 4,167,612). The Applicant respectfully disagrees with the rejections and, therefore, respectfully traverses the same.

Nishida et al. describes a sheet feeding mechanism with a bail roller 20 with a double structure made up of an outer layer 23 and an inner layer 24, as shown in Fig. 2A. (Nishida et al. at col. 2, lines 22-29.) The outer layer 23 is formed from engineering plastics such as polyacetal, nylon, ABS, or the like. (Nishida et al. at col. 2, lines 34-36.) The outer layer 23 preferably is made from polyacetal with a friction coefficient in the range of 0.3 to 0.5. (Nishida et al. at col. 2, lines 42-44.) The inner core 24 is formed of an elastically deformable material such as urethane foam, soft rubber, or the like. (Nishida et al. at col. 2, lines 53-56.) Preferably, the inner core 24 is made of urethane foam with a compression set at 1.7% to 4.4%. (Nishida et al. at col. 2, lines 55-61.) The ratio of the thickness of the inner core 24 to the outer layer 23 is not limited to any specific value. (Nishida et al. at col. 2, lines 65-68.)

Among other features, Nishida et al. fails to describe a roller with a thickness of the first layer is below 1/2 of that of the second layer. Moreover, Nishida et al. describes a roller with a coefficient of friction that is between 0.3 and 0.5, the entire range of which is less that the a coefficient of dynamic friction recited by claim 1, which is more than 0.7 at less than a relative velocity difference 200 mm/s. There is no discussion of any hardness of the second layer, let alone any indication of a hardness of below 40 at least at either Asker C hardness or JIS K 6253 E type hardness, as recited by claim 1. Additionally, since Nishida et al. states that the thickness ratio of the inner core 24 to the outer layer 23 is not limited to any specific value, Nishida et al. clearly does not describe a construction where a thickness of the second layer is more than 1.8 times of the most thick paper-like material. Accordingly, there are

several deficiencies associated with the Nishida et al. reference that render Nishida et al. particularly inapplicable to the present invention as recited by claims 1 and 3.

Kawasaki et al. describes a pressure roller 1 that comprises a metal core 2, an elastic layer 3 made of silicone rubber, and a top layer 4 covering the elastic layer 3 and made of a fluororesin having a coefficient of dynamic friction. (Kawasaki et al. at col. 3, lines 1-5.) Coefficients of dynamic friction for the fluororesin top layer 4 are shown in Tables 2-3 and range between 0.15 and 0.40. (Kawasaki et al. at col. 3, lines 18-20, and at Tables 2 and 3.) As discussed in Kawasaki et al., the coefficient of friction of 0.25 or more is preferred to reduce the occurrence of image failure. (Kawasaki et al. at col. 5, lines 31-41, and also at Tables 4 and 5.) With respect to the relative thicknesses of the top layer 4 and the elastic layer 3, Kawasaki et al. states that the evaluated pressure rollers had an outer diameter of 15.8 mm, a thickness of the silicone rubber layer (the elastic layer 3) of 3 mm, and a thickness of the fluororesin top layer 4 of 50 μm. (Kawasaki et al. at col. 5, lines 51-54.)

Upon review of the reference, the Applicant respectfully notes that Kawasaki et al. does not describe any particular compression set of the second layer, let along a compression set below 5% as recited by claims 1 and 3. Next, there is nothing in Kawasaki et al. that describes a hardness of the second layer below 40 at least at either Asker C hardness or JIS K 6253 E type hardness. In addition, there is nothing in Kawasaki et al. that suggests a thickness of the second layer being more than 1.8 times of the most thick paper-like material. At least for these reasons, Kawasaki et al. also fails to describe many of the features recited by claims 1 and 3 and, for these reasons, among others, also fails to provide a sufficient basis for the rejection of claims 1 and 3.

Given that the two references both fail to describe many of the features recited by claims 1 and 3, the Applicant respectfully submits that the two references, either alone or in combination, cannot be relied upon to render obvious claims 1 and 3. Accordingly, the Applicant respectfully submits that the rejection of claims 1 and 3 in view of these references must be withdrawn.

With respect to claim 3, the Examiner asserted Tucker et al., noting that the reference describes a construction of a second layer with a tear strength of more than 6 kN/m. The Applicant does not find reference to any tear strength in metric units. Specifically, Tucker et al. describes tear strengths of 4.1 ppi (pounds per inch) (see Tucker et al. at col. 7, line 37), 4.25 ppi (see Tucker et al. at col. 7, line 60), 3.8 ppi (see Tucker et al. at col. 8, line 13), and 4.0 ppi (see Tucker et al. at col. 8, line 37) for the foams described. The Applicant

respectfully requests that the Examiner take Official Notice of the following conversion factors, as provided by the conversion calculator found at http://www.metric4us.com/calculator.html. There, it may be seen that 1 N = 0.2248089 lb. force. Accordingly, 1 kN = 224.8089 lbs. force. In addition, 1 m = 39.37008 in. With these conversion factors in mind, 1 kN/m = 6.0157 ppi. Accordingly, 6 kN = 36.0942 ppi. As a result, each of the tear strengths listed in Tucker et al. fall well below the limitation of above 6kN/m, as recited by claim 3. At least for this reason, the Applicant respectfully submits that Tucker et al. does not assist the Examiner with a rejection of claim 3.

In view of the foregoing, the Applicant respectfully submits that claims 1 and 3 are patentable over the references cited by the Examiner.

If there are any fees required for this submission that are not otherwise accounted for, please charge any fees such associated with the submission of this paper to Deposit Account Number 033975. The Commissioner for Patents is also authorized to credit any over payments to the above-referenced Deposit Account.

Respectfully submitted,
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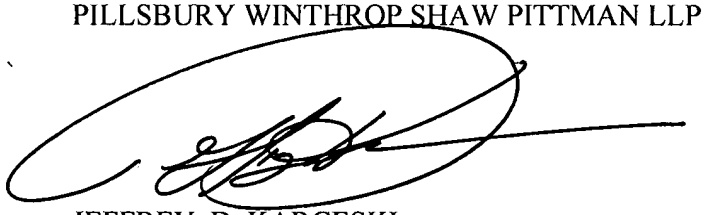

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